

5/28/99

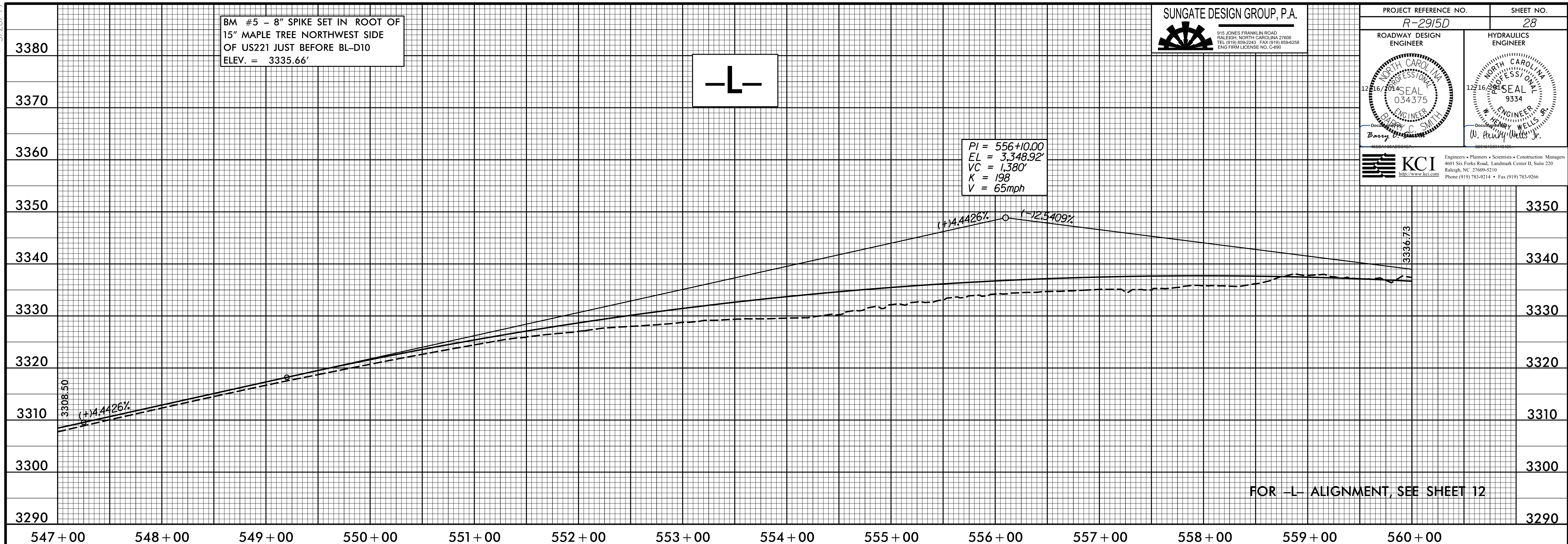
SUNGATE DESIGN GROUP, P.A.
913 JONES FRANKLIN ROAD
RALEIGH, NORTH CAROLINA 27606
TEL (919) 859-2243 FAX (919) 859-6288
ENG. FIRM LICENSE NO. C-490

PROJECT REFERENCE NO. R-2915D	SHEET NO. 28
ROADWAY DESIGN ENGINEER Barry C. Smith	HYDRAULICS ENGINEER W. Henry Wells Jr.
<small>Engineers • Planners • Scientists • Construction Managers 4601 Six Forks Road, Landmark Center II, Suite 220 Raleigh, NC 27609-5210 Phone (919) 783-9214 • Fax (919) 783-9266</small>	

BM #5 - 8" SPIKE SET IN ROOT OF 15" MAPLE TREE NORTHWEST SIDE OF US221 JUST BEFORE BL-D10
ELEV. = 3335.66'

-L-

PI = 556+10.00
EL = 3,348.92'
VC = 1,380'
K = 198
V = 65mph



FOR -L- ALIGNMENT, SEE SHEET 12

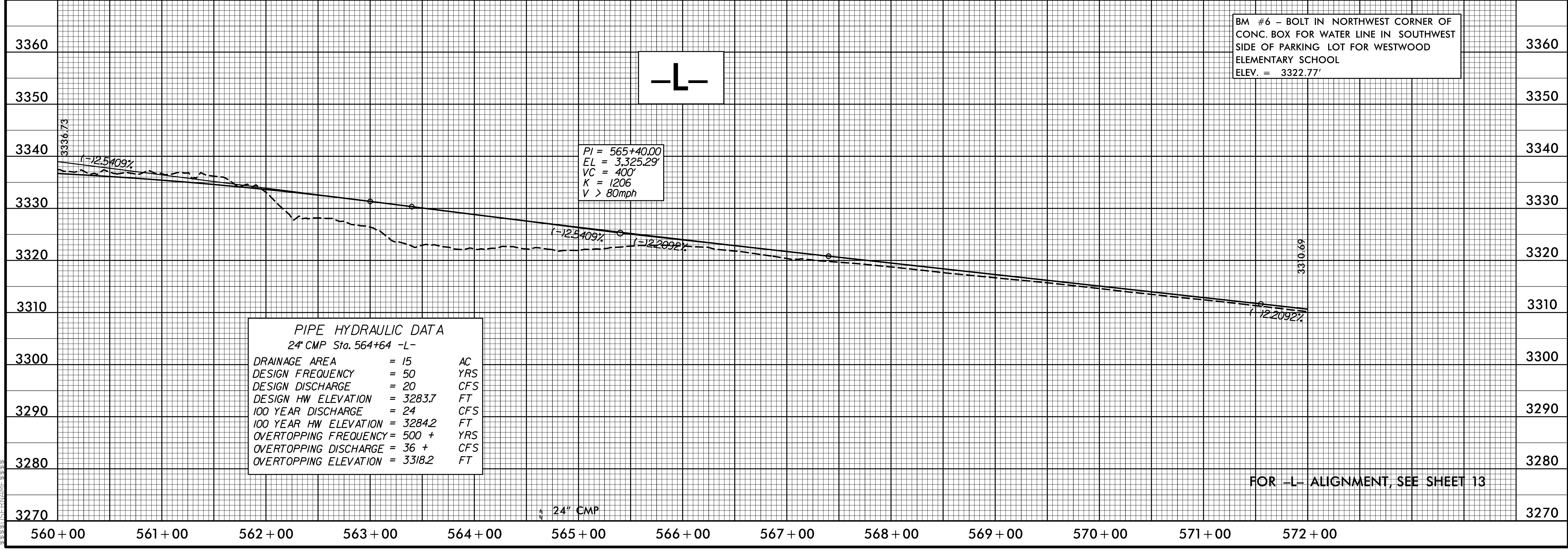
BM #6 - BOLT IN NORTHWEST CORNER OF CONC. BOX FOR WATER LINE IN SOUTHWEST SIDE OF PARKING LOT FOR WESTWOOD ELEMENTARY SCHOOL
ELEV. = 3322.77'

-L-

PI = 565+40.00
EL = 3,325.29'
VC = 400'
K = 1206
V > 80mph

PIPE HYDRAULIC DATA
24" CMP Sta. 564+64 -L-

DRAINAGE AREA	= 15	AC
DESIGN FREQUENCY	= 50	YRS
DESIGN DISCHARGE	= 20	CFS
DESIGN HW ELEVATION	= 3283.7	FT
100 YEAR DISCHARGE	= 24	CFS
100 YEAR HW ELEVATION	= 3284.2	FT
OVERTOPPING FREQUENCY	= 500 +	YRS
OVERTOPPING DISCHARGE	= 36 +	CFS
OVERTOPPING ELEVATION	= 3318.2	FT



FOR -L- ALIGNMENT, SEE SHEET 13

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